Getting Started with Modern Analytics and Governance at Scale

Microsoft Cloud-scale analytics scenario covers both technical and non-technical considerations for analytics and governance in the cloud. This guidance strives to support hybrid and multi-cloud adoption by being cloud agnostic, but the included technical implementation examples focus on Azure products.

Cloud-scale analytics has the following goals:

- Serve data as a product, rather than a byproduct
- Provide an ecosystem of data products, rather than a singular data warehouse that might not best fit your data scenario
- Drive a default approach to enforce data governance and security
- Drive teams to consistently prioritize business outcomes instead of focusing just on the underlying technology.

Cloud-scale analytics builds upon Microsoft's cloud adoption framework and requires understanding of landing zones. If you don't already have an implementation of Azure landing zones, consult your cloud teams about how to meet prerequisites. For more information, see Ensure the environment is prepared for the cloud adoption plan.

Assessment & Design (4 weeks)*

Current state vs Future State
Target State Design

Current State

- Architecture
- Services
- Deployment
- People and Organization
- Use Cases / Value Realization

Target State & Recommendations

- Target State High Level Design
- Data Catalog Design
- Prioritized MVP
- Roadmap alignment

MVP (3 Sprints)*

Deploy the Data Mesh foundation services (Data Platform Operations Zone, and one Domain Zone), and onboard one Data Product to the platform (Domain Zone).

Foundation

- Domain Zones (template)
- Data Lake
- Template creation

Data Governance

- Data Definition, Glossary, and Catalog (Purview)
- PII Detection, Governance

Data Ingestion

- Metadata driven ingestion framework
- Data Standardization

Data Discovery

- Data access management

Data Ordering /Provisioning

- Host data to server use-cases

Phase 2 (~2 Sprints)*

On-boarding more data products, optimize UI and operation to be ready for full production.

Data Governance

- Attribute based control (ADLS Gen2, SQL, Purview Policy)

Data Discovery

- Shared with me
- Custom Attributes (customer build)
- Catalog Extension to other UIs

Phase 3 (~1 Month)*

Enhancements

Foundation

- Data Standardization
- Standardized Data Models
- Master Reference Data for Data Cleansing
- Programmable data quality rules

Discovery

- Data Exploration with Data Profile:
- Ingestion Tags
- Data Usage Dashboard

Ingestion

- Micro batch/Streaming

Data Management

- Metadata Management
- Master data Management

*Timeline subject to modern analytics governance scenarios and fit of current asset features at opportunity level

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Modern Analytics and Governance at Scale

Data Product Implementation Accelerators

PLATFORM OPERATIONS CONSOLE, AUTOMATION AND TEMPLATES

- Domain Provisioning
- Data Application Provisioning
- Data Source Onboarding
- Data Agnostic Ingestion
- Data Standardizedion
- Data Quality
- Metadata Registration
- Access Provisioning

METADATA –DRIVEN DATA MANAGEMENT FRAMEWORK

- MDMF enables metadata-based authoring of data ingestion and curation data products. Data validation and data transformation from disparate data sources in a standardized and automated process using Azure Data Factory or Synapse Pipelines and (optionally) Databricks
- Requires minimal configuration steps and framework is immediately ready to ingest and load data
- Standardization on common pipelines, and single store for configuration and metadata reduces defects, maintenance and operational costs
- Best security principles are leveraged using Azure Active Directory and Azure Key Vault to protect customer data

RAPID DEPLOYMENT FRAMEWORK

- Azure cloud data platform deployment accelerator that leverages resource templates and automatic deployment pipelines to automatically deploy and configure Azure services
- Allows organizations to deliver quality products to market faster [and in compliance with Security Standards] by automating and accelerating Azure services deployment in Azure DevOps.
- Key benefits: Automated operations, improved workforce management, distributed cost, isolated and secure environment
- Hub and spoke deployment model setup

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- 26+ ACN Innovation Centers, including 5 Data Studio & Innovation Centers and 5 Advanced Analytics Innovation Centers
- 20+ years of advanced analytics experience, 70+ clients from Fortune Global 100
- 500+ data governance professionals and 550+ data architects in enterprise data management
- Azure Migration Factory: a new model to realize migration for your organization

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